

ICOLSE 2009 ADVANCE PROGRAM

TIME	TUESDAY 15 SEPTEMBER 2009	
6:30 am – 8:30 am	Breakfast – "One West", Second Floor – Open Seating Buffet (6:30 am – 8:00 am) Tuesday Session Chairs – Meet with Presenters (8:00 am, Location: Ballroom)	
8:30 am – 9:45 am	Announcements from Mr. Edward Rupke, Conference Chair (Location: Ballroom) Welcome from Senator Benjamin Downing (State Senator for Western Massachusetts) Schedule Updates and Spouses Programs	
9:45 am – 10:15 am	Coffee Break	
Location	Berkshire 2	Conference Room 2
10:15 am – 11:45 am	<p>Session 1 – Lightning Zoning <i>Chair: Greg Rigden</i></p> <p>AAP-1 – Interpretations of Model Attachment Test Results in the Terms of Zones - (Plumer)</p> <p>GWA-1 – Numerical Model to Determine Lightning Attachment Point Distributions on Wind Turbines According to the Revised IEC 61400-24 (Madsen)</p> <p>Sub-Session 1 - A/C Strike Probability Analysis</p> <p>AAP-3 - Lightning Return Stroke Threat Probability Distribution (C. Jones)</p>	<p>Session 2 – Lightning Hazard to Personnel <i>Chair: Brian Kraft</i></p> <p>GME-1 – Lightning Caused Deaths and Injuries in and Near Buildings (Holle)</p> <p>SPE-1 – Mechanisms of Lightning Injury (Cooper)</p> <p>GME-3 – Lightning Fatalities and Fatality Rates by U. S. State (Holle)</p>
11:45 am – 1:00 pm	Lunch (Grand Ballroom)	
1:00 pm – 2:30 pm	<p>Session 3 - Lightning Testing <i>Chair: Chris Jones</i></p> <p>AAT-2 – Impulse Voltage Breakdown and Surface Discharge Characteristics of Windscreen Plexiglas® (Zischank)</p> <p>AAT-3 – Application of Statistics to Spark Ignition Threshold Evaluation (Kwon)</p> <p>AAT-6 – New Lightning Test Facility Design of High Current Generators in Compliance with SAE ARP 5416 (Kamihara)</p>	<p>Session 4 – Ground Lightning Protection <i>Chair: Soren Madsen</i></p> <p>GFA-1 – A Model for Lightning in Littoral Areas (Blah)</p> <p>GFS-2 – The Early Streamer Emission Scene in Europe and the New IEC/EN Lightning Protection Standard (Burrows)</p> <p>GSD-1 – Lightning Protection Materials Used on Radar System (Blah)</p>
2:30 PM - 3:00 PM	Coffee (Sponsored by: Dayton-Granger)	
3:00 pm – 4:30 pm	<p>Session 6 - Round Table Discussion</p> <p>FAA Policy for Fuel Tank Structural Lightning Certification Requirements (25.981)</p> <p>Round Table Participants:</p> <ul style="list-style-type: none"> • Gregory Dunn - FAA • David Walen - FAA • Jean-Patrick Moreau - Dassault Aviation • Steven Haigh - Cobham Lightning • Andy Plumer - Lightning Technologies, Inc. 	<p>Session 5 – Numerical Modeling Analysis <i>Chair: James Elliott</i></p> <p>AAA-1 – The Benefits of Circuit Modeling for Lightning Protection (Brilliant)</p> <p>AAA-11 – Computer Modeling of Slots and Gaps During a Lightning Strike (Earl)</p>
<p>An Evening at Hancock Shaker Village Sponsored by: Lightning Technologies Inc.</p> <p>Guided Tour of Village Grounds Appetizers - Cider and Cheese Cash Bar Shaker Supper</p> <p>Busses depart from Crowne Plaza Hotel by 5:30 pm and return by 9:00 pm</p>		

TIME	WEDNESDAY 16 SEPTEMBER 2009	
6:30 am – 8:30 am	Breakfast - "One West", Second Floor – Open Seating Buffet (6:30 am - 8:00 am) Wednesday Session Chairs – Meet with Presenters (8:00 am, Location: Ballroom)	
8:30 am – 9:30 am	Invited Presentation: "Lightning Research at the Empire State Building" Presented by: Mr. John Anderson Location: Ballroom	
9:30 am – 9:50 am	Coffee Break	
9:50 am - 12:00 pm	OFF-SITE TOUR (Transportation Provided) Laboratory Tours: Electrical Power Research Institute Outdoor Facility or Lightning Technologies, Inc.	
12:00 am - 1:15 pm	Lunch (Grand Ballroom)	
	Berkshire 2	Conference Room 2
1:15 pm – 2:45 pm	<p align="center">Session 7 – Composites Protection <i>Chair: Andrew Robb</i></p> <p>AAM-5 – Advances in Lightning Strike and Electromagnetic Protection Via Nanotechnology (Hansen)</p> <p>AAM-7 – Electrical Characterizations of Lightning Strike Protection Techniques for Composite Materials (Szatkowski)</p> <p>AAM-4 – Evaluation of Conductive Nanomaterials for Lightning Strike Protection of Polymeric Composites (Gibson)</p>	<p align="center">Session 8 – Lightning and Buildings <i>Chair: Allen Hall</i></p> <p>GFS-1 – Mitigating Rapid Redistribution of Charge: FAA Standards for Facility Lightning Protection (Graves)</p> <p>GFD-1 – Lightning Protection of a Large High Consequence Operations Building (Newton)</p> <p>GME-2 – Lightning Caused Deaths and Injuries In and Near Dwellings (Holle)</p>
2:45 pm – 3:15 pm	Coffee Break (Sponsored by Rising Tide Consulting)	
3:15 pm – 4:45 pm	<p align="center">Session 9 – In-Flight Lightning Detection and Measurements <i>Chair: Ron Holle</i></p> <p>AAA-1A – Presentation 1: In-flight Lightning Damage Assessment System (ILDAS) Results of the Concept Prototype Tests (Zwemmer)</p> <p>AAA-1B – Presentation 2: In-flight Lightning Damage Assessment System (ILDAS) Results of the Concept Prototype Tests</p> <p>AAA-1C – Presentation 3: In-flight Lightning Damage Assessment System (ILDAS) Results of the Concept Prototype Tests</p>	<p align="center">Session 10 – Electrostatics <i>Chair: Danny Turner</i></p> <p>AEP-1 – The Charging of Aircraft in a Dust Storm Environment (Perala)</p> <p>AET-2 – A Study of Electrostatic Charges on 22LR Projectiles Fired from a Rifle (Robb)</p> <p>AEP-3 – A Critical Review of Precipitation Research since the 1930's and Comparison to Aircraft Charging by Dust (Perala)</p>
6:00 pm – 8:30 pm	<p align="center">Conference Banquet – Location: Ballroom Sponsored by: Testinglab Denmark, ApS</p> <p align="center">Evening Music Entertainment Provided by Pittsfield Music School Social Hour - String Trio, Dinner - Piano, Dessert - Cabaret</p> <p align="center">6:00 pm – 6:45 pm, Appetizers and Cash Bar 6:45 pm – 8:15 pm, Dinner 8:15 PM – KM Award Presentation and Invited Banquet Speaker</p> <p align="center">KM Awards Ceremony – 2009 Nobu Kitagawa Medal in Keraunomedicine Recipients Dr. Michael Cherington (USA) & Dr. Tomoe Ishikawa (Japan) Presented by Mary Ann Cooper</p> <p align="center">Invited Presentation – Lightning: NASA vs Mother Nature by Steve Jones A discussion of National Aeronautics and Space Administration flight vehicles from Apollo to Constellation and their interaction with lightning.</p>	

TIME	THURSDAY 17 SEPTEMBER 2009	
6:30 am – 8:30 am	Breakfast - "One West", Second Floor – Open Seating Buffet (6:30 am – 8:00 am) Thursday Session Chairs - Meet with Presenters in Ballroom (8:00 am)	
Location	Berkshire 2	Conference Room 2
8:30 am – 10:00 am	<p>Session 11 – Composites and Fasteners <i>Chair: David Walen</i></p> <p>AAM-6 – Understanding the Sparking Phenomenon in CFRP Assemblies (Revel)</p> <p>AAD-1 – Development of Conforming Sleeved Fastener Technology for Lightning Protection of Composite Aircrafts (Mulazimoglu)</p> <p>AAM-1 – Testing the Contact Resistance of Various Fastener Systems in Composite Laminate (Ransom)</p>	<p>Session 12 – Wind Turbines and Tall Structures <i>Chair: Kuzuo Yamamoto</i></p> <p>GWD-1 – Verification of Safe Locations in a Wind Turbine During Thunderstorms (Erichsen)</p> <p>GFD-3 – Improved Lightning Protection Measures for Floating Roof Hydrocarbon Storage Tanks (Haigh)</p> <p>GWT-1 – Mobile Impulse Current Generator for Verifying the Lightning Protection of Wind Turbines According to IEC 61400-24 (Madsen)</p>
10:00 am – 10:30 am	Coffee Break (Sponsored by: Dayton-Granger)	
10:30 am – 12:00 pm	<p>Session 13 – Composites Direct Effects <i>Chair: Stephen Haigh</i></p> <p>AAT-1 – Simulated Lightning Attachment on Unpainted Aluminum Panels During Continuing Current Stage: Effects of the Jet Diverting Electrode (Chemartin)</p> <p>AAM-2 – Evaluation of CFRP with Expanded Products Under Arc Entry Lightning Strike (Ransom)</p> <p>AAM-3 – Damage of Carbon/Epoxy Composite Plates Subjected to Mechanical Impact and Simulated Lightning Strike (Kawakami)</p>	<p>Session 14 – Lightning Effects on Vehicles and Structures <i>Chair: Rod Perala</i></p> <p>AST-1 – NASA Manned Launch Vehicle Lightning Protection Development (McCollum)</p> <p>GFP-1 – Examining Rapid Redistribution of Charge: FAA Site Case Study of Near Strike Damage (Graves)</p> <p>AAA-13 – Assessment of Direct Effects Damages by Modeling Techniques (Gineste)</p>
12:00 pm – 1:15 pm	Lunch (Grand Ballroom)	
1:15 pm – 3:15 pm	<p>Session 15 – Numerical Simulation and Testing <i>Chair: Brian Burrows</i></p> <p>AAT-5 – Surface Magnetic Field Measurements Using Ferrite Core Sensors (Tsumura)</p> <p>AAA-6 – Evaluation Study of Lightning Current Distribution in Plate Materials (Tsumura)</p> <p>AAA-5 – Modeling the Effects of Anisotropic Materials on Lightning Induced Current Flow in Structures Containing Carbon Fiber Reinforced Plastic (Kitaygorsky)</p> <p>AAA-12 – Study of Current Flow and Incidental Electrical and Magnetic Fields on Carbon Fiber Reinforced Plastic Box Structure by Numerical Simulation (Kamihara)</p>	<p>Session 16 – Aerospace Vehicle Test and Assessments <i>Chair: Ralf Marcordes</i></p> <p>AAT-5 – Sweep Channel Attachment Test of Composite Material Part for Aircraft (Zemin)</p> <p>AAT-4 – Comparison of Lightning Induced Effects on Cables and Systems in Carbon Fiber Composite and Aluminum Alloy Bodies (Moufouma)</p> <p>AET-1 – Lightning Interaction on Shielded Cables Determining the Proper Voltage and Current Waveshapes (Rupke)</p> <p>AAA-5 – Assessment Methodologies for Comparison of Aircraft Transient Levels to Equipment Transient Design Levels (Rupke)</p>
3:15 pm – 3:45 pm	Coffee Break (Sponsored by (Lightning Technologies, Inc.))	
3:45 pm - 5:15 pm	<p>Closing Session</p> <p>Report on Status of Industry Standards Updates by Technical Committees – SAE/EUROCAE and IEC</p> <p>Awards Presentation on ICOLSE 2011 Conference Wrap-up and Closing</p>	

Friday - 18 Sept. - 9:30-11:30AM Alternate Tour to Lightning Technologies Inc. - Sign Up at Conference